CIVIL QUALITY
CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil
Bitumen, Non Destructive Testing Services, Project
Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date: 01.11.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX
AASHTO T 164 & AASHTO T 30

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**M/s. MSV Construction Company,** Bangalore.
Name of the Work	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
Date of Testing	01.11.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477.2	477.2
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	22.80	22.80
7. Bitumen content in %	4.56	4.56
8. Average	**4.56**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	23	23	4.8	95.2	90 - 100
19	51	74	15.5	84.5	71 - 95
13.2	45	119	24.9	75.1	56 - 80
4.75	162	281	58.9	41.1	38 - 54
2.360	52	333	69.8	30.2	28 - 42
0.300	98	431	90.3	9.7	7 - 21
0.075	31	462	96.8	3.2	2 - 8

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	42	42	8.8	91.2	90 - 100
19	65	107	22.4	77.6	71 - 95
13.2	52	159	33.3	66.7	56 - 80
4.75	84.00	243	50.9	49.1	38 - 54
2.360	82	325	68.1	31.9	28 - 42
0.300	63	388	81.3	18.7	7 - 21
0.075	65	453	94.9	5.1	2 - 8

Note:

1. The Material is Satisfied as per the Requirements.

Assistant Executive Engineer
T. Dasarahalli Sub Division
Bagalagunte, BBMP
Bangalore-560073

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Corporate Off : No. 133, Bhuvaneshwarinagar, Doddabasti Main Road, Bangalore-560 056.
Contact : 8553518550, 080-23240644 Email : civilqualityconsultants@gmail.com

CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No.: CQCE/BBMP/MSV/W.No.14/2021-22 Date: 01.11.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX

AASHTO T 164 & AASHTO T 30

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**M/s. MSV Construction Company,** Bangalore.
Name of the Work	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
Date of Testing	01.11.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477.6	477
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	22.40	23.00
7. Bitumen content in %	4.48	4.60
8. Average	**4.54**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	33.7	33.7	7.1	92.9	90 - 100
19	70.4	104.1	21.8	78.2	71 - 95
13.2	66.4	170.5	35.7	64.3	56 - 80
4.75	91.1	261.6	54.8	45.2	38 - 54
2.360	67.2	328.8	68.8	31.2	28 - 42
0.300	92.1	420.9	88.1	11.9	7 - 21
0.075	34.5	455.4	95.4	4.6	2 - 8

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	34.4	34.4	7.2	92.8	90 - 100
19	78.8	113.2	23.7	76.3	71 - 95
13.2	65.5	178.7	37.5	62.5	56 - 80
4.75	81.2	259.9	54.5	45.5	38 - 54
2.360	74.8	334.7	70.2	29.8	28 - 42
0.300	91.2	425.9	89.3	10.7	7 - 21
0.075	23.3	449.2	94.2	5.8	2 - 8

Note:

Þ The Material is satisfie as per the requirement.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Assistant Executive Engineer
T. Dasarahalli Sub Division
Bangalagunte, BBMP
Bangalore-560057

Authorised Signatory

Corporate Off: No. 433, Bhuvaneshwarinagar, Doddabasti Main Road, Bangalore-560 056.
Contact : 8553518550, 080-23240644 Email : civilqualityconsultants@gmail.com

CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date: 01.11.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX AASHTO T 164 & AASHTO T 30

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**M/s. MSV Construction Company,** Bangalore.
Name of the Work	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
Date of Testing	01.11.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477.3	477.5
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	22.70	22.50
7. Bitumen content in %	4.54	4.50
8. Average	**4.52**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	21	21	4.4	95.6	90 - 100
19	84	105	22.0	78.0	71 - 95
13.2	70	175	36.7	63.3	56 - 80
4.75	84	259	54.3	45.7	38 - 54
2.360	65	324	67.9	32.1	28 - 42
0.300	90	414	86.7	13.3	7 - 21
0.075	34	448	93.9	6.1	2 - 8

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	31	31	6.5	93.5	90 - 100
19	45	76	15.9	84.1	71 - 95
13.2	64	140	29.3	70.7	56 - 80
4.75	99.10	239.1	50.1	49.9	38 - 54
2.360	71	310.1	64.9	35.1	28 - 42
0.300	91	401.1	84.0	16.0	7 - 21
0.075	51	452.1	94.7	5.3	2 - 8

Note:

1. The Material is Satisfied as per the Requirements.

Assistant Executive Engineer
T. Dasarahalli Sub Division
Bagalagunte, BBMP
Bangalore-560073

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Corporate Off : No. 133, Bhuvaneshwarinagar, Doddabasti Main Road, Bangalore-560 056.
Contact : 8553518550, 080-23240644 Email : civilqualityconsultants@gmail.com

CIVIL QUALITY
CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil
Bitumen, Non Destructive Testing Services, Project
Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date: 01.11.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX
AASHTO T 164 & AASHTO T 30

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**M/s. MSV Construction Company,** Bangalore.
Name of the Work	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
Date of Testing	01.11.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477.2	477.3
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	22.80	22.70
7. Bitumen content in %	4.56	4.54
8. Average	4.55	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	42	42	8.8	91.2	90 - 100
19	62	104	21.8	78.2	71 - 95
13.2	51	155	32.5	67.5	56 - 80
4.75	92	247	51.8	48.2	38 - 54
2.360	80	327	68.5	31.5	28 - 42
0.300	96	423	88.6	11.4	7 - 21
0.075	32	455	95.3	4.7	2 - 8

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	32	32	6.7	93.3	90 - 100
19	75	107	22.4	77.6	71 - 95
13.2	61	168	35.2	64.8	56 - 80
4.75	82.30	250.3	52.4	47.6	38 - 54
2.360	86	336.3	70.5	29.5	28 - 42
0.300	91	427.3	89.5	10.5	7 - 21
0.075	25	452.3	94.8	5.2	2 - 8

Note:

1. The Material is Satisfied as per the Requirements.

Assistant Executive Engineer
Dasarahalli Sub Division
Bagalagunte, BBMP
Bangalore-560073

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Corporate Off : No. 133, Bhuvaneshwarinagar, Doddabasti Main Road, Bangalore-560 056.
Contact : 8553518550, 080-23240644 Email : civilqualityconsultants@gmail.com

CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date: 01.11.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX AASHTO T 164 & AASHTO T 30

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**M/s. MSV Construction Company,** Bangalore.
Name of the Work	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
Date of Testing	01.11.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477.2	477.5
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	22.80	22.50
7. Bitumen content in %	4.56	4.50
8. Average	4.53	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	33.4	33.4	7.0	93.0	90 - 100
19	72.9	106.3	22.3	77.7	71 - 95
13.2	65.8	172.1	36.1	63.9	56 - 80
4.75	83.9	256	53.6	46.4	38 - 54
2.360	75.2	331.2	69.4	30.6	28 - 42
0.300	96.8	428	89.7	10.3	7 - 21
0.075	21.6	449.6	94.2	5.8	2 - 8

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	36.5	36.5	7.6	92.4	90 - 100
19	72.4	108.9	22.8	77.2	71 - 95
13.2	66.9	175.8	36.8	63.2	56 - 80
4.75	84.50	260.3	54.5	45.5	38 - 54
2.360	78.6	338.9	71.0	29.0	28 - 42
0.300	97.6	436.5	91.4	8.6	7 - 21
0.075	23.5	460	96.3	3.7	2 - 8

Note:

1. The Material is Satisfied as per the Requirements.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Assistant Executive Engineer
T. Dasarahalli Sub Division
Bagalagunte, BBMP
Bangalore-560073

Authorised Signatory

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CIVIL QUALITY
CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil
Bitumen, Non Destructive Testing Services, Project
Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date: 07.12.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX
AASHTO T 164 & AASHTO T 30

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**M/s. MSV Construction Company,** Bangalore.
Name of the Work	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
Date of Testing	07.12.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477.6	477.3
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	22.40	22.70
7. Bitumen content in %	4.48	4.54
8. Average	4.51	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	35	35	7.3	92.7	90 - 100
19	56	91	19.1	80.9	71 - 95
13.2	41	132	27.6	72.4	56 - 80
4.75	96	228	47.7	52.3	38 - 54
2.360	64	292	61.1	38.9	28 - 42
0.300	89	381	79.8	20.2	7 - 21
0.075	63	444	93.0	7.0	2 - 8

SIEVE SIZE	Test 2				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	31	31	6.5	93.5	90 - 100
19	72	103	21.6	78.4	71 - 95
13.2	60	163	34.2	65.8	56 - 80
4.75	72.00	235	49.2	50.8	38 - 54
2.360	81	316	66.2	33.8	28 - 42
0.300	95	411	86.1	13.9	7 - 21
0.075	45	456	95.5	4.5	2 - 8

Note:

1. The Material is Satisfied as per the Requirements.

Assistant Executive Engineer
T. Dasarahalli Sub Division
Bagalagunte, BBMP
Bangalore-560073

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Corporate Off : No. 133, Bhuvaneshwarinagar, Doddabasti Main Road, Bangalore-560 056.
Contact : 8553518550, 080-23240644 Email : civilqualityconsultants@gmail.com

CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date: 07.12.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX AASHTO T 164 & AASHTO T 30

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**M/s. MSV Construction Company,** Bangalore. .
Name of the Work	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
Date of Testing	07.12.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477.1	477.2
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	22.90	22.80
7. Bitumen content in %	4.58	4.56
8. Average	4.57	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	19	19	4.0	96.0	90 - 100
19	86	105	22.0	78.0	71 - 95
13.2	62	167	35.0	65.0	56 - 80
4.75	78	245	51.4	48.6	38 - 54
2.360	61	306	64.1	35.9	28 - 42
0.300	86	392	82.2	17.8	7 - 21
0.075	65	457	95.8	4.2	2 - 8

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	26	26	5.4	94.6	90 - 100
19	42	68	14.2	85.8	71 - 95
13.2	61	129	27.0	73.0	56 - 80
4.75	98.00	227	47.6	52.4	38 - 54
2.360	65	292	61.2	38.8	28 - 42
0.300	93	385	80.7	19.3	7 - 21
0.075	59	444	93.0	7.0	2 - 8

Note:

1. The Material is Satisfied as per the Requirements.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Assistant Executive Engineer
T. Dasarahalli Sub Division
Bagalagunte, BBMP
Bangalore-560073

Authorised Signatory

Corporate Off : No. 133, Bhuvaneshwarinagar, Doddabasti Main Road, Bangalore-560 056.
Contact : 8553518550, 080-23240644 Email : civilqualityconsultants@gmail.com

CIVIL QUALITY
CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil
Bitumen, Non Destructive Testing Services, Project
Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date: 07.12.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX
AASHTO T 164 & AASHTO T 30

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**M/s. MSV Construction Company,** Bangalore.
Name of the Work	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
Date of Testing	07.12.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477.1	477
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	22.90	23.00
7. Bitumen content in %	4.58	4.60
8. Average	**4.59**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	32.1	32.1	6.7	93.3	90 - 100
19	72.9	105	22.0	78.0	71 - 95
13.2	65.8	170.8	35.8	64.2	56 - 80
4.75	83.9	254.7	53.4	46.6	38 - 54
2.360	75.2	329.9	69.1	30.9	28 - 42
0.300	96.8	426.7	89.4	10.6	7 - 21
0.075	21.6	448.3	94.0	6.0	2 - 8

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	36.5	36.5	7.7	92.3	90 - 100
19	72.4	108.9	22.8	77.2	71 - 95
13.2	66.9	175.8	36.9	63.1	56 - 80
4.75	84.50	260.3	54.6	45.4	38 - 54
2.360	78.6	338.9	71.0	29.0	28 - 42
0.300	97.6	436.5	91.5	8.5	7 - 21
0.075	21.3	457.8	96.0	4.0	2 - 8

Note:

1. The Material is Satisfied as per the Requirements.

Assistant Executive Engineer
T. Dasarahalli Sub Division
Bagalagunte, BBMP
Bangalore-560073

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Corporate Off : No. 133, Bhuvaneshwarinagar, Doddabasti Main Road, Bangalore-560 056.
Contact : 8553518550, 080-23240644 Email : civilqualityconsultants@gmail.com

CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date: 07.12.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX

AASHTO T 164 & AASHTO T 30

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**M/s. MSV Construction Company,** Bangalore.
Name of the Work	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
Date of Testing	07.12.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477	478
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	23.00	22.00
7. Bitumen content in %	4.60	4.40
8. Average	4.50	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	38	38	8.0	92.0	90 - 100
19	64	102	21.4	78.6	71 - 95
13.2	61	163	34.2	65.8	56 - 80
4.75	73	236	49.5	50.5	38 - 54
2.360	85	321	67.3	32.7	28 - 42
0.300	64	385	80.7	19.3	7 - 21
0.075	78	463	97.1	2.9	2 - 8

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	26	26	5.4	94.6	90 - 100
19	68	94	19.7	80.3	71 - 95
13.2	62	156	32.6	67.4	56 - 80
4.75	76.00	232	48.5	51.5	38 - 54
2.360	62	294	61.5	38.5	28 - 42
0.300	91	385	80.5	19.5	7 - 21
0.075	79	464	97.1	2.9	2 - 8

Note:

1. The Material is Satisfied as per the Requirements

Assistant Executive Engineer
T. Basavanahalli Sub Division
Bagalagunte, BBMP
Bangalore-560073

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Corporate Off : No. 133, Bhuvaneshwarinagar, Doddabasti Main Road, Bangalore-560 056.
Contact : 8553518550, 080-23240644 Email : civilqualityconsultants@gmail.com

CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date: 07.12.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX AASHTO T 164 & AASHTO T 30

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**M/s. MSV Construction Company,** Bangalore.
Name of the Work	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
Date of Testing	07.12.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477	477.2
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	23.00	22.80
7. Bitumen content in %	4.60	4.56
8. Average	**4.58**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	16	16	3.4	96.6	90 - 100
19	82	98	20.5	79.5	71 - 95
13.2	60	158	33.1	66.9	56 - 80
4.75	92	250	52.4	47.6	38 - 54
2.360	34	284	59.5	40.5	28 - 42
0.300	94	378	79.2	20.8	7 - 21
0.075	68	446	93.5	6.5	2 - 8

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	26	26	5.4	94.6	90 - 100
19	36	62	13.0	87.0	71 - 95
13.2	68	130	27.2	72.8	56 - 80
4.75	93.00	223	46.7	53.3	38 - 54
2.360	62	285	59.7	40.3	28 - 42
0.300	96	381	79.8	20.2	7 - 21
0.075	65	446	93.5	6.5	2 - 8

Note:

1. The Material is Satisfied as per the Requirements.

Assistant Executive Engineer
T. Dasarahalli Sub Division
Bagalagunte, BBMP
Bangalore-560073

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Corporate Off : No. 133, Bhuvaneshwarinagar, Doddabasti Main Road, Bangalore-560 056.
Contact : 8553518550, 080-23240644 Email : civilqualityconsultants@gmail.com

CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date : 05.11.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**M/s. MSV Construction Company,** Bangalore.
NAME OF THE WORK	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
DATE OF TESTING	05.11.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	469	468.2
3. Weight of Asphalt and Mineral matter Extracted, g	31	31.8
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	31	31.8
7. Bitumen content in %	6.20	6.36
8. Average	6.28	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	42	42	9.0	91.0	90 - 100
9.5	82	124	26.4	73.6	70 - 88
4.75	90	214	45.6	54.4	53 - 71
2.36	45	259	55.2	44.8	42 - 58
1.18	35	294	62.7	37.3	34 - 48
0.600	45	339	72.3	27.7	26 - 38
0.300	37	376	80.2	19.8	18 - 28
0.150	26	402	85.7	14.3	12 - 20
0.075	30	432	92.1	7.9	4 - 10

SIEVE SIZE mm	Test 2				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	22	22	4.7	95.3	90 - 100
9.5	90	112	23.9	76.1	70 - 88
4.75	82	194	41.4	58.6	53 - 71
2.36	65	259	55.3	44.7	42 - 58
1.18	43	302	64.5	35.5	34 - 48
0.600	40	342	73.0	27.0	26 - 38
0.300	32	374	79.9	20.1	18 - 28
0.150	15	389	83.1	16.9	12 - 20
0.075	52	441	94.2	5.8	4 - 10

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Note:

1. The Material is Satisfied as per the Requirements

Assistant Executive Engineer
BBMP (SWM) Dasarahalli Division
Bagalagunte, Bangalore-560073

CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date : 05.11.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**M/s. MSV Construction Company,** Bangalore.
NAME OF THE WORK	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
DATE OF TESTING	05.11.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	469	469.4
3. Weight of Asphalt and Mineral matter Extracted, g	31	30.6
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	31	30.6
7. Bitumen content in %	6.20	6.12
8. Average	6.16	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.17
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	36	36	7.7	92.3	90 - 100
9.5	80	116	24.7	75.3	70 - 88
4.75	99	215	45.8	54.2	53 - 71
2.36	48	263	56.1	43.9	42 - 58
1.18	40	303	64.6	35.4	34 - 48
0.600	36	339	72.3	27.7	26 - 38
0.300	24	363	77.4	22.6	18 - 28
0.150	35	398	84.9	15.1	12 - 20
0.075	40	438	93.4	6.6	4 - 10

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.17
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	12.2	12.2	2.6	97.4	90 - 100
9.5	65.3	77.5	16.5	83.5	70 - 88
4.75	98	175.5	37.4	62.6	53 - 71
2.36	46	221.5	47.2	52.8	42 - 58
1.18	42.3	263.8	56.2	43.8	34 - 48
0.600	51.1	314.9	67.1	32.9	26 - 38
0.300	43.9	358.8	76.4	23.6	18 - 28
0.150	32.1	390.9	83.3	16.7	12 - 20
0.075	56	446.9	95.2	4.8	4 - 10

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Assistant Executive Engr
T. Dasarahalli Sub Division
Bangalore-560073

Note:

1. The Material is Satisfied as Per the Requirements of BBMP

CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date : 05.11.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**M/s. MSV Construction Company,** Bangalore.
NAME OF THE WORK	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
DATE OF TESTING	05.11.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	468	470
3. Weight of Asphalt and Mineral matter Extracted, g	32	30
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	32	30
7. Bitumen content in %	6.40	6.00
8. Average	6.20	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	12.2	12.2	2.6	97.4	90 - 100
9.5	65.3	77.5	16.6	83.4	70 - 88
4.75	99.1	176.6	37.7	62.3	53 - 71
2.36	47.6	224.2	47.9	52.1	42 - 58
1.18	42.3	266.5	56.9	43.1	34 - 48
0.600	51.1	317.6	67.9	32.1	26 - 38
0.300	43.9	361.5	77.2	22.8	18 - 28
0.150	46.8	408.3	87.2	12.8	12 - 20
0.075	32.5	440.8	94.2	5.8	4 - 10

SIEVE SIZE mm	Test 2 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	16	16	3.4	96.6	90 - 100
9.5	65.3	81.3	17.3	82.7	70 - 88
4.75	98	179.3	38.1	61.9	53 - 71
2.36	46	225.3	47.9	52.1	42 - 58
1.18	42.3	267.6	56.9	43.1	34 - 48
0.600	51.1	318.7	67.8	32.2	26 - 38
0.300	43.9	362.6	77.1	22.9	18 - 28
0.150	32.1	394.7	84.0	16.0	12 - 20
0.075	49.2	443.9	94.4	5.6	4 - 10

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Assistant Executive Engineer
Dasarahalli Sub Division
Bagalagunte, BBMP
Bangalore-560073

Notes:

1. The Material is Satisfied as per the Requirements.

Corporate Off : No. 133, Bhuvaneshwarinagar, Doddabasti Main Road, Bangalore-560 056.
Contact : 9595518550, 080-23240644 Email : civilqualityconsultants@gmail.com

CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date : 25.11.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**M/s. MSV Construction Company,** Bangalore.
NAME OF THE WORK	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
DATE OF TESTING	25.11.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	469.1	470
3. Weight of Asphalt and Mineral matter Extracted, g	30.9	30
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	30.9	30
7. Bitumen content in %	6.18	6.00
8. Average	6.09	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	36	36	7.7	92.3	90 - 100
9.5	60	96	20.5	79.5	70 - 88
4.75	91	187	39.9	60.1	53 - 71
2.36	46	233	49.7	50.3	42 - 58
1.18	39	272	58.0	42.0	34 - 48
0.600	50	322	68.6	31.4	26 - 38
0.300	60	382	81.4	18.6	18 - 28
0.150	29	411	87.6	12.4	12 - 20
0.075	23	434	92.5	7.5	4 - 10

SIEVE SIZE mm	Test 2 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	32.2	32.2	6.9	93.1	90 - 100
9.5	62	94.2	20.0	80.0	70 - 88
4.75	50	144.2	30.7	69.3	53 - 71
2.36	77	221.2	47.1	52.9	42 - 58
1.18	45	266.2	56.6	43.4	34 - 48
0.600	52	318.2	67.7	32.3	26 - 38
0.300	42	360.2	76.6	23.4	18 - 28
0.150	31	391.2	83.2	16.8	12 - 20
0.075	49.2	440.4	93.7	6.3	4 - 10

Assistant Executive Engr.
T. Dasarahalli Sub Division
Bangalore-560073

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Note:

1. The Material is Satisfied as per the Requirements

Corporate Off : No. 133, Bhuvaneshwarinagar, Doddabasti Main Road, Bangalore-560 056.
Contact : 8553518550, 080-23240644 Email : civilqualityconsultants@gmail.com

CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date : 25.11.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**M/s. MSV Construction Company,** Bangalore.
NAME OF THE WORK	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
DATE OF TESTING	25.11.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	469.8	468
3. Weight of Asphalt and Mineral matter Extracted, g	30.2	32
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	30.2	32
7. Bitumen content in %	6.04	6.40
8. Average	6.22	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.17
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	41	41	8.7	91.3	90 - 100
9.5	69	110	23.4	76.6	70 - 88
4.75	91	201	42.8	57.2	53 - 71
2.36	45	246	52.4	47.6	42 - 58
1.18	41	287	61.1	38.9	34 - 48
0.600	50	337	71.7	28.3	26 - 38
0.300	40	377	80.2	19.8	18 - 28
0.150	31	408	86.8	13.2	12 - 20
0.075	24	432	92.0	8.0	4 - 10

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.17
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	30	30	6.4	93.6	90 - 100
9.5	61	91	19.4	80.6	70 - 88
4.75	90	181	38.7	61.3	53 - 71
2.36	40	221	47.2	52.8	42 - 58
1.18	63	284	60.7	39.3	34 - 48
0.600	54	338	72.2	27.8	26 - 38
0.300	42	380	81.2	18.8	18 - 28
0.150	23	403	86.1	13.9	12 - 20
0.075	36	439	93.8	6.2	4 - 10

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Note:

1. The Material is Satisfied as per the Requirement.

Assistant Executive Engineer, T.B. Dasarahalli Sub Division, Bagalagunte, BBMP, Bangalore-560073

CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date : 25.11.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**M/s. MSV Construction Company,** Bangalore.
NAME OF THE WORK	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
DATE OF TESTING	25.11.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	469.3	470
3. Weight of Asphalt and Mineral matter Extracted, g	30.7	30
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	30.7	30
7. Bitumen content in %	6.14	6.00
8. Average	6.07	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	26	26	5.5	94.5	90 - 100
9.5	64	90	19.2	80.8	70 - 88
4.75	92	182	38.8	61.2	53 - 71
2.36	42	224	47.7	52.3	42 - 58
1.18	45	269	57.3	42.7	34 - 48
0.600	35	304	64.8	35.2	26 - 38
0.300	42	346	73.7	26.3	18 - 28
0.150	39	385	82.0	18.0	12 - 20
0.075	63	448	95.5	4.5	4 - 10

SIEVE SIZE mm	Test 2 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	25	25	5.3	94.7	90 - 100
9.5	62	87	18.5	81.5	70 - 88
4.75	91	178	37.9	62.1	53 - 71
2.36	64	242	51.5	48.5	42 - 58
1.18	52	294	62.6	37.4	34 - 48
0.600	50	344	73.2	26.8	26 - 38
0.300	34	378	80.4	19.6	18 - 28
0.150	31	409	87.0	13.0	12 - 20
0.075	32	441	93.8	6.2	4 - 10

Assistant Executive Engineer
Dasarahalli Sub Division
Bellanduru, BBMP
Bangalore-560073

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Note:

The Material is Satisfied as per the Requirements

Corporate Off : No. 133, Bhuvaneshwarinagar, Doddabasti Main Road, Bangalore-560 056.
Contact : 8553518550, 080-23240644 Email : civilqualityconsultants@gmail.com

CIVIL QUALITY
CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil
Bitumen, Non Destructive Testing Services, Project
Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date : 16.12.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**M/s. MSV Construction Company,** Bangalore.
NAME OF THE WORK	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
DATE OF TESTING	16.12.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	468	469.6
3. Weight of Asphalt and Mineral matter Extracted, g	32	30.4
4. Weight of Mineral Matter, g	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	32	30.4
7. Bitumen content in %	6.40	6.08
8. Average	6.24	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	26	26	5.6	94.4	90 - 100
9.5	64	90	19.2	80.8	70 - 88
4.75	92	182	38.9	61.1	53 - 71
2.36	42	224	47.9	52.1	42 - 58
1.18	45	269	57.5	42.5	34 - 48
0.600	35	304	65.0	35.0	26 - 38
0.300	42	346	73.9	26.1	18 - 28
0.150	39	385	82.3	17.7	12 - 20
0.075	63	448	95.7	4.3	4 - 10

SIEVE SIZE mm	Test 2 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	25	25	5.3	94.7	90 - 100
9.5	62	87	18.5	81.5	70 - 88
4.75	91	178	37.9	62.1	53 - 71
2.36	64	242	51.5	48.5	42 - 58
1.18	52	294	62.6	37.4	34 - 48
0.600	50	344	73.3	26.7	26 - 38
0.300	34	378	80.5	19.5	18 - 28
0.150	31	409	87.1	12.9	12 - 20
0.075	32	441	93.9	6.1	4 - 10

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Note:
1. The Material is Satisfied as per Specification.

Assistant Executive Engineer
T. Dasarahalli Sub Division
Bagalagunte, BBMP
Bangalore-560073

Authorised Signatory

Corporate Office : 153, Bhuvaneshwarinagar, Doddabasti Main Road, Bangalore-560 056.
Contact : 8553518550, 080-23240644 Email : civilqualityconsultants@gmail.com

CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date : 16.12.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**M/s. MSV Construction Company,** Bangalore.
NAME OF THE WORK	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
DATE OF TESTING	16.12.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	468	468.2
3. Weight of Asphalt and Mineral matter Extracted, g	32	31.8
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	32	31.8
7. Bitumen content in %	6.40	6.36
8. Average	6.38	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	31	31	6.6	93.4	90 - 100
9.5	51	82	17.5	82.5	70 - 88
4.75	93	175	37.4	62.6	53 - 71
2.36	75	250	53.4	46.6	42 - 58
1.18	39	289	61.8	38.2	34 - 48
0.600	41	330	70.5	29.5	26 - 38
0.300	33	363	77.6	22.4	18 - 28
0.150	45	408	87.2	12.8	12 - 20
0.075	35	443	94.7	5.3	4 - 10

SIEVE SIZE mm	Test 2				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	21	21	4.5	95.5	90 - 100
9.5	60	81	17.3	82.7	70 - 88
4.75	90	171	36.5	63.5	53 - 71
2.36	40	211	45.1	54.9	42 - 58
1.18	72	283	60.4	39.6	34 - 48
0.600	53	336	71.8	28.2	26 - 38
0.300	40	376	80.3	19.7	18 - 28
0.150	35	411	87.8	12.2	12 - 20
0.075	23	434	92.7	7.3	4 - 10

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Executive Engineer
T. Dasarahalli Sub Division
Bagalagunte, BBMP

Note:
1. The Material is Satisfied as per Specification.

Complex Bldg. No. 133, Bhuvaneshwarinagar, Doddabasti Main Road, Bangalore-560 056.
Contact: 8553518550, 080-23240644 Email : civilqualityconsultants@gmail.com

CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date: 16.12.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**M/s. MSV Construction Company,** Bangalore.
NAME OF THE WORK	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
DATE OF TESTING	16.12.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	469.9	468
3. Weight of Asphalt and Mineral matter Extracted, g	30.1	32
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	30.1	32
7. Bitumen content in %	6.02	6.40
8. Average	**6.21**	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	40	40	8.5	91.5	90 - 100
9.5	81	121	25.8	74.2	70 - 88
4.75	92	213	45.3	54.7	53 - 71
2.36	42	255	54.3	45.7	42 - 58
1.18	30	285	60.7	39.3	34 - 48
0.600	45	330	70.2	29.8	26 - 38
0.300	32	362	77.0	23.0	18 - 28
0.150	42	404	86.0	14.0	12 - 20
0.075	36	440	93.6	6.4	4 - 10

SIEVE SIZE mm	Test 2				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	21	21	4.5	95.5	90 - 100
9.5	85	106	22.6	77.4	70 - 88
4.75	79	185	39.5	60.5	53 - 71
2.36	62	247	52.8	47.2	42 - 58
1.18	45	292	62.4	37.6	34 - 48
0.600	36	328	70.1	29.9	26 - 38
0.300	31	359	76.7	23.3	18 - 28
0.150	46	405	86.5	13.5	12 - 20
0.075	29	434	92.7	7.3	4 - 10

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Assistant Executive Engineer
T. Dasarahalli Sub Division
Bagalagunte, BBMP
Bangalore-560073

Note:

1. The Material is Satisfied as per Contract Requirements

Corporate Off : No.133, Bhuvaneshwarinagar, Doddabasti Main Road, Bangalore-560 056.
Contact : 8095518550, 080-23240644 Email : civilqualityconsultants@gmail.com

CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil
Bitumen, Non Destructive Testing Services, Project
Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date : 16.12.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**M/s. MSV Construction Company,** Bangalore.
NAME OF THE WORK	Construction of Anganavadi Building at Govt. Higher Primary School premises Bhuvaneswari Nagar and Reconstruction and Improvements od roads and CC drain at 7th main 11th cross surroundings 11th A cross road. Bhuvaneswari Nagara and 3rd, 4th, 7th main road of MEI layout and MEI layout new Extn main road and cross in Ward No 14. Package No DZ 2017-18 (1) 4 works, BBMP, Bangalore.
DATE OF TESTING	16.12.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	469	470
3. Weight of Asphalt and Mineral matter Extracted, g	31	30
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	31	30
7. Bitumen content in %	6.20	6.00
8. Average	6.10	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	32	32	6.8	93.2	90 - 100
9.5	75	107	22.8	77.2	70 - 88
4.75	91	198	42.2	57.8	53 - 71
2.36	46	244	52.0	48.0	42 - 58
1.18	53	297	63.3	36.7	34 - 48
0.600	42	339	72.3	27.7	26 - 38
0.300	21	360	76.8	23.2	18 - 28
0.150	37	397	84.6	15.4	12 - 20
0.075	49	446	95.1	4.9	4 - 10

SIEVE SIZE mm	Test 2 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	11	11	2.3	97.7	90 - 100
9.5	63	74	15.7	84.3	70 - 88
4.75	95	169	36.0	64.0	53 - 71
2.36	78	247	52.6	47.4	42 - 58
1.18	40	287	61.1	38.9	34 - 48
0.600	52	339	72.1	27.9	26 - 38
0.300	41	380	80.9	19.1	18 - 28
0.150	30	410	87.2	12.8	12 - 20
0.075	26	436	92.8	7.2	4 - 10

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Assistant Executive Engineer
Dasarahalli Sub Division
Bagalagunte, BEML
Bangalore-560073

Note:

1. The Material is Satisfied as per the Requirements